

Arbovirus Surveillance Summary, 2004
Infectious Disease Laboratory Division
Division of Epidemiology and Immunization

WEST NILE VIRUS (WNV)

Birds

In 2004, 1689 dead birds were reported to the Massachusetts Department of Public Health (MDPH) Arbovirus Surveillance Program. Of the 89 that were tested for WNV, only one crow and seven blue jays were positive for WNV (see table below). Birds that tested positive for WNV were found in eight towns from six counties.

Number of Birds Reported, Tested and Positive for WNV by Species, 2004

Status	Species			Total
	Crow	Blue jay	Other	
Reported	321	145	1223	1689
Tested	30	31	28	89
WNV (+)	1	7	0	8

Mosquito Pools

Fifteen of 7730 mosquito pools tested were positive for WNV during the 2004 transmission season. Positive pools were identified in nine Massachusetts towns in five counties. Positive mosquito pools included one pool of *Culex species*, nine pools of *Culex pipiens*, and five pools of *Culex restuans*.

Horses

There were no cases of WNV infection identified in horses in Massachusetts in 2004.

Humans

There were no cases of WNV infection identified in humans in Massachusetts in 2004.

Specimens Submitted and Positive for WNV by Year, 2001-2004*

Species	Number WNV Tested/Positive							
	2001		2002		2003		2004	
	Tested	Positive	Tested	Positive	Tested	Positive	Tested	Positive
Birds	2396	1104	857	575	599	429	89	8
Mosquito Pools	6297	25	6471	68	5980	48	7730	15
Horses	91	45	40	2	38	8	34	0
Humans	247	3	614	24**	790	19***	440	0

*Comparisons between years must consider variations in surveillance criteria.

**Two cases were in out of state residents; however, their exposure was believed to have been in Massachusetts.

***One case believed to have been contracted out of state and one probable case.

EASTERN EQUINE ENCEPHALITIS (EEE) VIRUS

Birds

Birds are not routinely tested for EEE virus in Massachusetts. However, one emu tested positive for EEE virus in 2004 from the city of Haverhill in Essex County.

Mosquito Pools

Thirty-nine of 7730 mosquito pools tested were positive for EEE virus in Massachusetts in 2004. They were collected from 17 towns in four counties. Positive EEE virus mosquito pools included 36 pools of *Culiseta melanura*, two pools of *Culex species* and one pool of *Ochlerotatus canadensis*.

Horses

Seven horses tested positive for EEE virus in Massachusetts in 2004. They were identified in six towns from four counties. In addition to these seven EEE virus positive horses, one alpaca from the town of Carlisle in Middlesex County tested positive for EEE virus in 2004.

Humans

Four cases of EEE in humans, including two fatalities, were identified in Massachusetts in 2004. Cases were identified in Plymouth and Norfolk counties from the towns of Holbrook, Brockton, Middleborough and Foxboro. Onset of symptoms among the four cases ranged from 7/31/2004 to 10/24/2004. The cases ranged in age from 11-64 years.

Specimens Submitted and Positive for EEE Virus by Year, 2001-2004*

Species	Number EEE Virus Tested/Positive							
	2001		2002		2003		2004	
	Tested	Positive	Tested	Positive	Tested	Positive	Tested	Positive
Mosquito Pools	6297	12	6471	1	5980	9	7730	39
Horses	91	0	42	0	38	4	34	7
Humans	50	1	91	0	329	0	389	4
Other**	0	0	0	0	1	1	2	2

* Comparisons between years must consider variations in surveillance criteria.

** This includes one emu in 2003; one emu and one alpaca in 2004.

Eastern Equine Encephalitis (EEE) Virus Activity

Affected Massachusetts Cities and Towns 2004 *

Species

- Equine
- Human
- Mosquito
- Mosquito and Equine
- Mosquito and Equine and Human
- Mosquito and Human
- Other **
- Un-Affected Cities

*Cities and towns not shown had no EEE virus activity identified in 2004.

* There were no cases of EEE virus identified

** Includes one emu from the city of Haverhill and one alpaca from the town of Carlisle

0 4.5 9 18 Miles



Bureau of Communicable Disease Control - Integrated Surveillance & Informatics Services